Innovating for sustainable construction

The environment is today a top priority within the construction industry. This, along with the new stringent green building regulations, has made the role of a reliable manufacturer and supplier of eco-friendly construction solutions really crucial.

Fulfilling this responsibility with tremendous success, Jehan Gulf Horizon has transformed conventional perspectives of construction. Driven to build a safer future for all, the company is committed to deliver green, energy-efficient solutions in the form of self-supporting alternative structural systems.

Jehan Green Walls are distinguished by a unique alternative structural system. The 3D panels manufactured by Jehan consist of a fire-retardant EPS core with two wire meshes on either side, held together by truss wires that pass through the core.

Used to construct monolithic self-supporting structures for low-rise buildings, they offer a number of advantages over traditional framed RCC structures.

- **Excellent Insulation:** This reduces consumption of electricity, saves energy costs, helps preserve the environment, and makes the structure compliant with Green building parameters.
- **Lightweight Construction:** This leads to cost savings in relation to labour, handling, foundation material etc.
- **Architectural Flexibility:** This is possible thanks to its unique structure.
Alternative structural system for low rise construction

- Total self-supporting structure eliminating the need for columns, beams and framed structures.

- 3D Panels are erected onsite to form skeleton of the building.

- 3D Panels are used as slabs and act as permanent shutter for the slabs. Shuttering works for columns and slabs are eliminated.

- After 3D Panels are installed, shotcrete/concrete is sprayed/poured to form the structures.

- Spans up to 6m can be constructed using the 3D panels without any additional RCC structures. Spans over 6m can be designed with the help of columns and beams.

Insulated gypsum precast walls

- Gypsum Solid Precast Panels are produced with 3D Panels and Fiber reinforced Gypsum.

- Panels are used as interior partition walls.

- They are just 25% of the weight of block walls.

- Provide a fire rating of 4 Hours.

- Panels are manufactured as per requirements with the necessary design features / MEP containment and openings for doors and windows.

- Walls are finished to receive paint.
Insulated concrete precast walls

- Concrete Precast panels are produced with 3D Panels
- This generally eliminates the requirement of tying steel as the same exists in the 3D Panel by default
- Insulated Sandwich Panels are formed due to the EPS core
- For Non-Load Bearing walls, the reinforcement in the 3D Panel is sufficient
- Panels are manufactured as per requirements with the necessary design features / MEP containment and openings for doors and windows
- Walls are finished to receive painting

Cast in-situ walls: Shotcrete spray

- 3D Panels can be used as infill walls to replace block work in framed structures
- Panels are placed and tied to each other to form the wall
- Panels are anchored to existing frame and sprayed with Shotcrete / plastered
- Can be used as external as well as internal partition walls
- Provides cost-effective and fast construction
- Easy to transport and carry at the construction site
Cast in-situ walls: Gypsum spray

- 3D Panels can be used as infill walls to replace block work in framed structures.
- Panels are placed and tied to each other to form the wall.
- Panels are anchored to existing frame and sprayed with fibre reinforced Gypsum Spray.
- Provides cost effective and fast construction that reduces the total weight of the superstructure significantly.
- Easy to transport and carry at the construction site for high rises.

The Jehan edge

- Low carbon solution.
- Fast construction:
  - 50% time saving as compared to conventional methods.
  - MEP builders work is much faster.
- Low manpower requirement:
  - 70% reduction in manpower.
- Ideal for volumetric construction.
- Cost efficient construction system.
- Lightweight Construction:
  - Lighter foundations.
  - Hence reduced cost.
  - Hence less use of material.
  - Hence reduced duration.
- Higher value of recycled material.
- Architect’s delight, can form any shape easily.
- Monolithic structure offers enhanced resistance to seismic forces.
- Self-supporting structure that has no need for RCC framework.
- However, can combine with framework to give it higher flexibility.
Proud accomplishments

Office & Warehouse Building in Jebel Ali (External Precast Concrete Walls).

Cottages for Al Tadib Resort, RAK (3D Panel Structural System).

3D structural system supporting large spans.

Concrete precast panels fixed with steel structure.

Infill Walls for Rakeen Project, RAK (Cast In-Situ Concrete Internal Walls)

District Cooling Plant, Meydan (Cast In-Situ Concrete External Walls)

District Cooling Plant, Meydan (Gypsum Precast Walls)

Versatile Applications

- Low Rise Construction (Villas, Townhouses, etc.)
- Commercial Buildings (Schools, Colleges, Hospitals, etc.)
- Labour Camps
- Boundary Walls
- High Rise Buildings
- Multi Storey Towers